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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,194	02/25/2002	Jaroslav Belonoznik	022500-021	2760
7590	08/24/2004			EXAMINER
George A. Hovanec, Jr. BURNS, DOANE, SWECKER & MATHIS, L.L.P. P.O. Box 1404 Alexandria, VA 22313-1404			CERULLO, JEREMY S	
			ART UNIT	PAPER NUMBER
			2112	

DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/081,194	BELONOZNIK, JAROSLAV	
	Examiner Jeremy S. Cerullo	Art Unit 2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 25 February 2002.  
 2a) This action is **FINAL**.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-8 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-8 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 25 February 2002 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 20020225.

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "8" has been used to designate two PCI buses. It is unclear if these are meant to be two portions of the same bus, or two separate buses. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to because Figures 1 and 2 do not contain suitable legends necessary to understand the drawing. See 37 CFR 1.84(o). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief

description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. While Figures 1 and 2 have reference numbers for the different elements of the invention, however the empty frames are not sufficient for understanding the figures. Therefore adequately descriptive legends are required by the examiner

***Priority***

4. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Czech Republic on February 26, 2001. It is noted, however, that applicant has not filed a certified copy of the PV 2001-720 application as required by 35 U.S.C. 119(b).

***Specification***

5. The disclosure is objected to because of the following informalities: the detailed description of the drawings does not refer to the drawings by figure number as required by 37 C.F.R. 1.74.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

***First Paragraph***

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 3-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

8. Claim 3 can be interpreted as reciting three processors, one processor of the semiconductor disc, one processor of the computing system, and a third processor connected to the local bus. Such a configuration is not adequately disclosed in the specification in such a way as to enable one skilled in the art to make and/or use the invention. The applicant may overcome this rejection by amending the claim in such a way as to clearly claim only the processors discussed in the specification.

9. Claims 4-8 are rejected based on their dependency on Claim 3.

***Second Paragraph***

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 3-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

12. Claim 3 recites the limitations "the local bus" in Lines 4 of Claim 3, "the programmable SCSI control unit" in Lines 4-5 of Claim 3, and "the external computing system with the SCSI control unit" in Line 7 of Claim 3. There is insufficient antecedent basis for these limitations in the claim.

13. Claim 3 refers to two separate processors in Line 2, the processor of the semiconductor disc and the processor of the computing system. In Line 4, Claim 3 recites a processor, failing to clear state to which, if either, of the two previously stated processors it is referring. The claim is therefore indefinite.

14. Claim 4 recites the limitation "synchronous dynamic SDRAM memory". It is known in the art that SDRAM is an acronym for Synchronous Dynamic Random Access Memory. Claim 4 is rejected as indefinite because it is unclear as to what meaning the applicant has assigned to SDRAM since he has added "synchronous", "dynamic", and "memory" as qualifiers.

15. Claims 5 and 8 recite the limitation "wherein it" in Line 2 of Claim 5 and in Line 2 of Claim 8. It is unclear whether "it" refers to the computing system or to the electronic semiconductor disc. Therefore, there is insufficient antecedent basis for these limitations in the claims.

16. Claim 6 recites the limitation "the unit of the programmable SCSI control unit" in Line 3 of Claim 6. There is insufficient antecedent basis for this limitation in the claim.

17. Claim 8 recites the limitation "the external computing system" in Lines 2 and 3 of Claim 8. There is insufficient antecedent basis for this limitation in the claim.

18. Claim 7 recites the limitation "programmable EPROM, PEROM, EEPROM, or flash EPROM memory". It is known in the art that the acronyms EPROM, PEROM, and EEPROM stand for Erasable Programmable Read Only Memory, Programmable Erasable Read Only Memory, and Electrically Erasable Programmable Read Only Memory, respectively. Claim 7 is rejected as indefinite because it is unclear as to what meaning the applicant has assigned to these acronyms since he has added "programmable", and "memory" as qualifiers.

19. The applicant may overcome these rejections by modifying the claim language in such a way as to more clearly state what elements are part of the invention as well as specify more clearly the interconnections between the components.

### ***Claim Rejections - 35 USC § 103***

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gulick, et al. (U.S. Patent No. 5,692,211), in view of Tuma, et al. (U.S. Patent No. 6,374,389). Gulick teaches the use of a PCI to SCSI adapter, which is equivalent to a control unit with PCI bus and SCSI bus and with program equipment for a hard disk of a

computing system (Figure 1). However, Gulick does not teach an electronic semiconductor disc. Tuma teaches a solid-state disk emulator (Column 4, Lines 29-34), which in the art is equivalent to an electronic semiconductor disc. Tuma also teaches that his solid-state disk emulator (electronic semiconductor disc) includes a processor and semiconductor memory (Column 6, Lines 8-28). Tuma also suggests the use of his solid-state disk emulator as a replacement for a hard disk (Column 4, Lines 29-34). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute an electronic semiconductor disc taught by Tuma for the hard disk in the use of a control unit with PCI and SCSI buses as taught by Gulick.

22. Claim 3 is so indefinite as to prevent the examiner from performing an adequate search. For the purposes of applying art, Claim 3 is interpreted as being drawn to the same invention as Claims 1 and 2 and this therefore rejected on the same basis. See above.

23. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gulick and Tuma as applied to claims 1-3 above, and further in view of Stephens, Jr. (U.S. Patent No. 5,386,385). Tuma teaches the use of DRAM in the disk emulator (Column 6, Lines 8-17), but does not teach the use of SDRAM. Stephens, teaches the use of SDRAM (Synchronous Dynamic Random Access Memory) in place of DRAM (Dynamic Random Access Memory), as well as the motivation for doing so (Column 1, Lines 62-66). SDRAM has a faster access rate than asynchronous DRAM. Therefore, one of ordinary skill in the art at the time of the invention would have been motivated to, as taught by Stephens, use SDRAM in place of the DRAM in the system taught by Gulick and Tuma.

24. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gulick and Tuma as applied to claims 1-3 above, and further in view of Topham, et al. (United States Patent Application Publication No. US 2001/0018728). Gulick and Tuma teach an electronic semiconductor disc, but they do not teach that the system comprises a hard disk. Topham teaches the use of a magnetic disk drive (a hard drive) in conjunction with a solid-state storage device (Page 6, Paragraphs 0102-0103). Topham also suggests that using a hard drive in conjunction with a solid-state storage device (electronic semiconductor disc) in order to protect the stored information from being lost in the event of a failure of the solid-state device (Page 1, Paragraph 0009). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention would have used an electronic semiconductor disc taught by Gulick and Tuma in conjunction with a hard disk drive as taught by Topham.

25. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gulick and Tuma as applied to claims 1-3 above, and further in view of Rang, et al. (U.S. Patent No. 6,003,017). Gulick and Tuma teach the PCI to SCSI adapter, but do not teach the added limitations of Claim 6. Rang teaches the internal configuration of a PCI to SCSI adapter that contains a ROM that is connected to the logic circuit of the adapter (Figure 1B). One of ordinary skill in the art at the time of the invention would be motivated to use the adapter taught by Rang in the system taught by Gulick and Tuma in order to select appropriate drivers stored in the ROM for various SCSI hosts (Column 4, Lines 27-40).

26. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gulick, Tuma, and Rang as applied to claim 6 above, and further in view of Chan, et al. (U.S.

Patent No. 5,388,267). Gulick, Tuma, and Rang teach all of the limitations of claim 7 except that the memory of the PCI adapter consists of EPROM, PEROM, EEPROM, or flash EPROM. Chan teaches the use of EPROM, EEPROM, and flash EPROM for BIOS (Column 3, Line 20 – Column 4, Line 26) in order to enable the modification or restoration of the code. One of ordinary skill in the art at the time of the invention would be motivated to use one of these programmable memories in the adapter of Gulick, Tuma, and Rang in order to make possible the modification of host drivers to correct for any errors in prior versions of the code.

27. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gulick, and Tuma as applied to claims 1-3 above, and further in view of Nguyen, et al. (U.S. Patent No. 5,185,876). Gulick and Tuma teach all of the limitations of Claim 8 except for the connection of the computer system by the SCSI bus to an external computing system. Nguyen teaches and suggests the connection of a computing system to an external computing system via a SCSI bus (Column 3, Lines 14-31). One of ordinary skill in the art at the time of the invention would have been motivated to follow Nguyen's suggestion to connect the system taught by Gulick and Tuma to an external computing system via a SCSI bus.

### ***Conclusion***

28. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. TIM-40 PEROM and Sysload Utility: Flash Programmable and Erasable ROM Programming Guide, U.S. Patent Application Publication No. US 2001/0032291, and U.S. Patent No. 6,754,680.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy S. Cerullo whose telephone number is (703) 305-6435. The examiner can normally be reached on Monday - Thursday, 6:45-4:15; Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark H. Rinehart can be reached on (703) 305-4815. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)



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